

AMENDMENTS TO THE TITLE:

Please replace the title of this application with the following new title:

**COLLABORATIVE, FAULT-TOLERANT, SCALEABLE, FLEXIBLE,
INTERACTIVE REAL-TIME DISPLAY AND PROCESSING METHOD AND
APPARATUS**

AMENDMENTS TO THE SPECIFICATION AND ABSTRACT:

Please replace the paragraph beginning at page 5, line 19, which starts with "FIG.. 4 is a second...", with the following amended paragraph:

C1
FIG.[[.]] 4 is a second screen shot illustrating a tabular presentation of data in accordance with the invention in which the data override feature is shown;

Please replace the paragraph beginning at page 26, line 3, which starts with "Referring to FIG. 33...", with the following amended paragraph:

C2
Referring to FIG. 33, an operation according to one embodiment of the invention, a user device 12Z, in this particular embodiment, will have a web server 40, an ApplicationServer 42, as well as a shared application 3303. In the case that the application is not initially located on the user device (such Java applet or C# based program, for example), as tested at 3410 (FIG. 34), it can be downloaded with associated resources at 3430 from other locations such as application storage 3340. Once the application is on the user device, the user can send a message to other users 12-12n at 3440 which will contain an identifier for the sharing access. The sharing users will utilize this identifier at 3440 to login to the user device through the web server and share the application. [[IN]]In some embodiments of this aspect of the invention, depending upon the nature of the shared application and the network 16, the WebServer and ApplicationServer may not be needed.

Please replace the paragraph beginning at 27, line 16, which starts with "Buttons 62a, 62b,...," with the following amended paragraph:

B3
Buttons 62a, 62b, ... 62m, in ~~this embodiment~~ FIG. 3, for example, when clicked upon, will automatically enable a rearrangement of the views, so that the column clicked upon is sorted and visually marked, and presented either in ascending (sort up) or descending (sort down) order. The marked column control button can be visually marked (such as enlarged, and/or highlighted or otherwise distinguished). Any of the columns can be selected and will control the reorientation of each of the rows into an order according to that column.

Please replace the paragraph beginning at page 28, line 8, which starts with "Alternative embodiment of the invention...", and continues to page 29, line 2, with the following amended paragraph:

C4
Alternative embodiment of the invention is multi-column sort, and multi-column sort lock/unlock. For example, as shown in FIG. 46A table 4610 presented, having three columns A (alphanumeric column), B (date column, where format used is Month/Day/Year) and numeric column C. Each of the columns has associated sort controls, such as sort ascending control 4602 and sort descending control 4603 in column A. Selecting control 4602 in FIG. 46A sorts table 4610 by ascending order of column A resulting in table 4620, while visually marking control 4602A, as shown in FIG. 46B. Selecting control 4604 in FIG. 46B sorts table 4620 by ascending order of column A and then ascending order of column B, resulting in table 4630, while visually marking control 4602A and 4604A, as shown in FIG. 46C. Selecting control 4606 in FIG. 46C sorts table 4620 by ascending order of column A, then ascending order of column B and then ascending order of column C, resulting in table 4640, while visually marking controls 4602A, 4604A and 4606A, as shown in FIG. 46D. In one embodiment, the sort order among the columns in the multi-column sort[[,]] is established by the relative positions of the columns. For example, moving column B in FIG. 46D to the first column, moves column A to the second column, and the sort among the column is done in the following order: first by ascending order of column B, then by ascending order of column A and then by ascending order of column C, resulting in table 4650, as shown in FIG. 46E. Selecting sort descending control 4608 in column C[[,]] results in table 4660, as shown in FIG. 46F, where ~~visually~~ visual marking is removed from control 4606A (indicated at 4606) and ~~visually~~ visual marking ~~control~~ is added to control 4608 as indicated at 4608A. Multi-column sort can be also sort locked, resulting in dynamically keeping the established sort order while data in the table is dynamically updated. Multi-column sort lock control will be typically located in per-table control bar described earlier.

Please replace the paragraph beginning at page 31, line 25, which starts with "Referring to Fig. 40A...", and continues to page 32, line 11, with the following amended paragraph:

C5
Referring to [[Fig]] FIG. 40A, other controls for effecting other manipulations of the table can be made visible by clicking on button 600. The control buttons { ' 4001, as shown at FIG. 40A, are used for preset or dynamic aggregation of the table by the content of the associated column when selected. Beside a preset aggregation table, where the aggregation criteria are fixed, the table can be dynamically aggregated by any column in the table. When a column is selected for aggregation by activating ' { ', the aggregate control 4001 will be

c5
visually marked (for example enlarged and/or highlighted) to indicate the selection, as shown at 4002 (FIG. 40B). If that column was not a first column, the aggregated column will become the first column. In the newly created aggregated table, only the numeric data columns that can be aggregated will be presented. When aggregated view 4020 is drilled down upon, by activating a folder-like control 4003A, for a row 4006 in the aggregated column, the resulting detail table 4040 (FIG. 40D) for that row will present all of the columns of data from the original table 4010. The original table 4010 will again be displayed after deselecting the selected '{' control 4002. Alternatively, selecting aggregation of a different column, for example column D in table 4020 will display a new aggregated table 4050 (FIG. 40E). In both cases, the ~~visually~~ visual marking of previously selected control 4002 will be removed.

Please replace the paragraph beginning at page 35, line 21, which starts with

"Charting/graphing can be...", with the following amended paragraph:

c6
Charting/graphing can be enabled for one column at a time, or for multiple columns (either ~~real~~ regular columns or proxy columns). A proxy column is one not fully revealed in the selected, displayed column. In the case of uni-column charting/graphing control, selecting the control will result in displaying one chart/graph at a time for the associated table. In the case of multiple column charting/graphing, the system will display a chart/graph of each of the plural selected columns separately, or combine them in one chart/graph, if possible, depending for example, on data and/or chart/graph type. Each of the charts has separate controls for further customization, for example a chart type control 658.

Please replace the paragraph beginning at page 38, line 1, which starts with "A table's columns can..." with the following amended paragraph:

c7
A table's columns can thus be of two types: regular and virtual. Regular columns are ones that appear in the tables, either visible or not (hidden). The virtual columns are ones that can be added to the table, either as a regular column or a proxy column. A proxy column is a column to whose content, column manipulation can be applied, thereby potentially changing the displayed data in the table or in a view related to the table, but without displaying the actual data of the proxy column. A virtual column can be selected from the virtual database using a list, a browsing mechanism or another convenient method. The user can decide how to use the virtual column (either as ~~real~~ regular or proxy column).

Please replace the paragraph beginning at page 38, line 26, which starts with "All displayed regular columns..." and continues to page 39, line 10, with the following amended paragraph:

c8 All displayed regular columns can become virtual. FIG. 43C illustrates a table 4330 with a 'V' control 4332 in the table headers, which were for example activated by using control actuation button 600. Activating the 'V' control in column C will remove this column from the table 4330, resulting in table 4340 as shown in FIG. 43D, although the column is still available for all purpose in the virtual column database 4315. The use of the virtual columns is illustrated in FIGS. 43E – I. The column M is added, as a result of user selection, as a proxy column to the table 4350 (FIG 43E) from the virtual column database 4315. The resulting table 4360 is shown in FIG. 43F, where 4365 represents a proxy column M. (Note that the content of the proxy column is not displayed, whereas the content is displayed when the virtual column is selected as ~~real~~ a regular column, and therefore added to a table, as in FIG. 43B.) Sorting table 4360 by ascending value content of column M (which has values of 125 for row 1, 175 for row 2, and 100 for row 3 as shown in column content 4366) by activating a sort ascending control 4367 in the proxy column header results in the table 4370 shown in FIG. 43G, where control 4367A is visually marked.

Please replace the paragraph beginning at page 46, line 18, which starts with "Referring to FIGS. 20A-D..." with the following amended paragraph:

c9 Referring to FIGS. 20A-D each page will have different display areas such as Display Browse Controls (View Group controls, View controls, View Slice controls), TableView , ChartView, AlertView, NewsView, MessageView[[m]] etc. Each of those and other display areas can be hidden or revealed by display area control actuation buttons, such as buttons 1800, 1801, 1802. Selecting such a control button on the visible area will make this area disappear. Selecting it again will make this area reappear. Selecting button 1800 in FIG. 20A will cause the page view to change and look like FIG. 20B. Selecting button 1802 in FIG. 20B will cause the page view to change and look like FIG. 20C. Selecting button 1802 in FIG. 20C will cause page view to change and look like FIG. 20D (the same view as FIG. 20B).

Please replace the Abstract on page 51 with the Abstract provided on the following page: